

# **21-Inch Color Monitor**

Installation and Operating Instructions

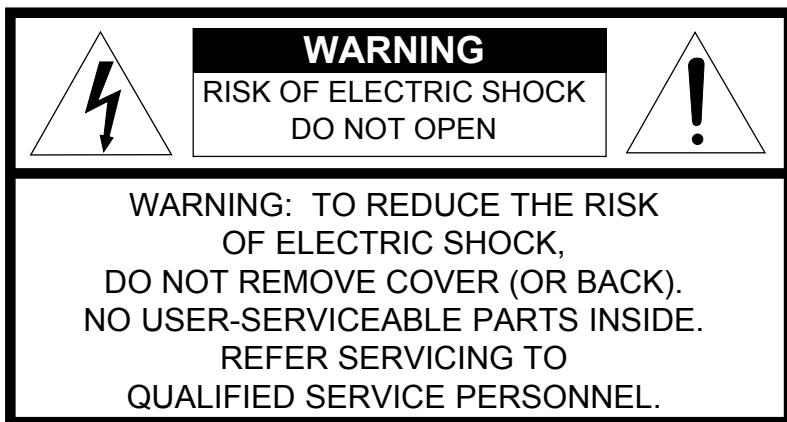
AMC21  
AMC21X



All information was correct at the time of publication. ADECMCO Video reserves the right to make changes and improvements to the product without notice.

## **WARNING:**

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.



## **Explanation of Graphic Symbols**



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## **Safety Precautions**

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.

Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on soft surfaces (rugs, carpets, sofas, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

Height and vertical linearity controls located on the rear panel are for special adjustments by qualified personnel only.

## **IMPORTANT SAFEGUARDS**

1. **READ INSTRUCTIONS** – Read the safety and operating instructions before operating the monitor.
2. **RETAIN INSTRUCTIONS** – Retain the safety and operating instructions for future reference.
3. **CLEANING** – Unplug video monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. **ATTACHMENTS** – Do not use attachments not approved by the video monitor manufacturer as they may result in the risk of fire, electric shock or injury.
5. **WATER AND MOISTURE** – Do not use video monitor near water; for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.
6. **ACCESSORIES** – Do not place video monitor or equipment on an unstable cart, stand or table. The video monitor or equipment may fall, causing serious injury and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.



7. **CARTS** – Video monitor and cart combinations should be moved with care. Quick stops, excessive force and uneven surfaces may cause the equipment and cart combination to overturn.
8. **VENTILATION** – Slots and openings in the cabinet and the back or bottom are provided for ventilation, to ensure reliable operation of the video monitor and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video monitor on a bed, sofa, rug or other similar surface. Video monitor should never be placed near or over a radiator or heat register. Video monitor should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. **POWER SOURCES** – Video monitor should be operated only from the type of power source indicated on the marking label. If you are not certain of the type of power supply you have, consult your video monitor dealer or local power company.
10. **GROUNDING OR POLARIZATION** – This video monitor may be equipped with a polarized alternating-current line plug (a plug with one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. If your video monitor is equipped with a three-wire grounding-type plug (a plug having a third grounding pin), this plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

- 11. POWER CORDS** – Do not allow anything to rest on the power cord. Do not locate video monitor or equipment where the cord can be damaged by persons walking on it.
- 12. HEED WARNINGS** – Follow all instructions marked on the video monitor.
- 13. LIGHTNING** – During lightning storms or when the monitor will be left unattended and unused for long periods, unplug the monitor and associated equipment from the wall outlet. This will prevent damage to the video equipment caused by lightning and power-line surges.
- 14. OVERLOADING** – Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
- 15. OBJECT AND LIQUID ENTRY** – Never push objects of any kind into video monitor through openings as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
- 16. SERVICING** – Do not attempt to service video monitor as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 17. DAMAGE REQUIRING SERVICE** – Unplug video monitor and equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
- A. When the power-supply cord or the plug has been damaged.
  - B. If liquid has spilled, or objects have fallen into the monitor.
  - C. If the monitor has been exposed to rain or water.
  - D. If the monitor does not operate normally when following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the monitor to its normal operation.
  - E. If the monitor has been dropped or the cabinet damaged.
  - F. When the monitor exhibits a distinct change in performance, this indicates a need for service.
- 18. REPLACEMENT PARTS** – When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 19. SAFETY CHECK** – Upon completion of any service or repairs to the monitor, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.
- 20. FIELD INSTALLATION** – Installation should be performed by a qualified service person and should conform to all local codes.

## FCC COMPLIANCE STATEMENT

**INFORMATION TO THE USER:** THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS B DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE IN A RESIDENTIAL INSTALLATION. THIS EQUIPMENT GENERATES, USES AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. HOWEVER, THERE IS NO GUARANTEE THAT INTERFERENCE WILL NOT OCCUR IN A PARTICULAR INSTALLATION. IF THIS EQUIPMENT DOES CAUSE HARMFUL INTERFERENCE TO RADIO OR TELEVISION RECEPTION, WHICH CAN BE DETERMINED BY TURNING THE EQUIPMENT OFF AND ON, THE USER IS ENCOURAGED TO TRY TO CORRECT THE INTERFERENCE BY ONE OR MORE OF THE FOLLOWING MEASURES:

- REORIENT OR RELOCATE THE RECEIVING ANTENNA
- INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND RECEIVER
- CONNECT THE EQUIPMENT TO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT TO WHICH THE RECEIVER IS CONNECTED
- CONSULT THE DEALER OR AN EXPERIENCED RADIO/TV TECHNICIAN FOR HELP

**CAUTION:** CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE MANUFACTURER COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE B EST CONFORME À LA NORME NMB-003 DU CANADA.

THIS PRODUCT COMPLIES WITH VARIOUS OTHER REGIONAL AND SAFETY REGULATIONS SUCH AS: UL, CUL, CSA, CE. THESE CERTIFICATIONS ARE NOTED ON THE PRODUCT LABEL.

## Table of Contents

Chapter 1 – Introduction .....	1
Features .....	1
Technical Overview .....	2
Chapter 2 – Installation .....	3
Required Installation Tools .....	4
Installation Instructions .....	4
Chapter 3 – Operation .....	7
Appendix A – Troubleshooting .....	9
Appendix B – Specifications .....	11

## List of Illustrations

Figure 1 – Typical configuration .....	1
Figure 2 – Front panel controls .....	3
Figure 3 – Rear panel connectors .....	3
Figure 4 – Single monitor connection .....	5
Figure 5 – Y/C Mini DIN connector configuration .....	5
Figure 6 – Multiple monitor connection .....	6
Figure 7 – Front Panel Controls .....	7
Figure 8 – OSD Menu .....	8





# Chapter 1 – Introduction

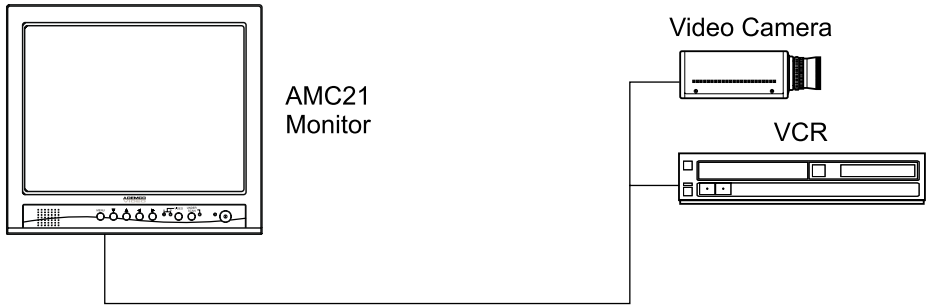


Figure 1 – Typical configuration

## Features

- Convenient front panel controls
- 21" flat, square picture tube
- OSD (on-screen display) setup menus
- Menus in English, French, Italian, German and Spanish
- NTSC and PAL compatible
- Multiple video and audio inputs and outputs
- S-VHS input and output connectors
- BNC loop-through connectors have automatic termination
- Switch between two video inputs
- Universal power supply from 90 to 254 VAC, 50Hz or 60Hz
- Switchable overscan and underscan

### Technical Overview

The ADEMCO AMC21 is a 21-inch color monitor with on-screen display (OSD) setup menus. The setup menus are switchable between English, French, Italian, German and Spanish.

The AMC 21 has multiple video and audio inputs and outputs. The user can switch between two video sources. The monitor has S-VHS connectors for the best quality video when connected to a compatible VCR. The 75-ohm BNC loop-through connectors are auto-terminated.

The AMC21 has a universal power supply. The monitor can be plugged into outlets ranging from 90 to 254 VAC and 50Hz or 60Hz. The monitor also automatically detects if the video input is NTSC or PAL and displays the picture correctly.

# Chapter 2 – Installation

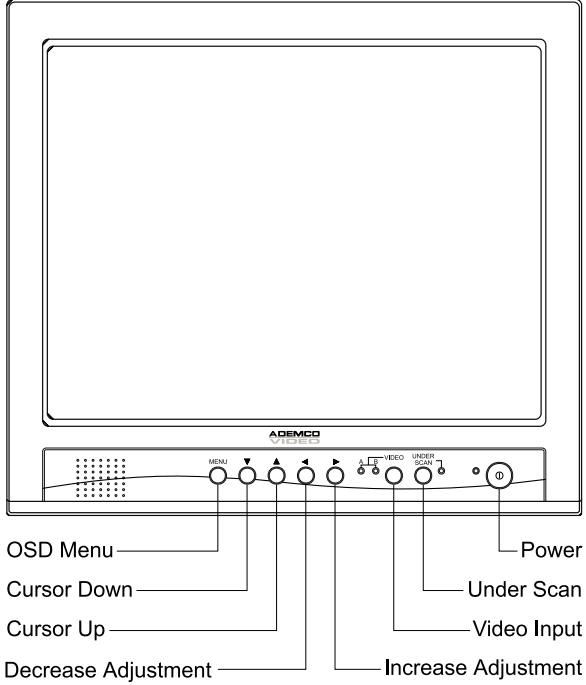


Figure 2 – Front panel controls

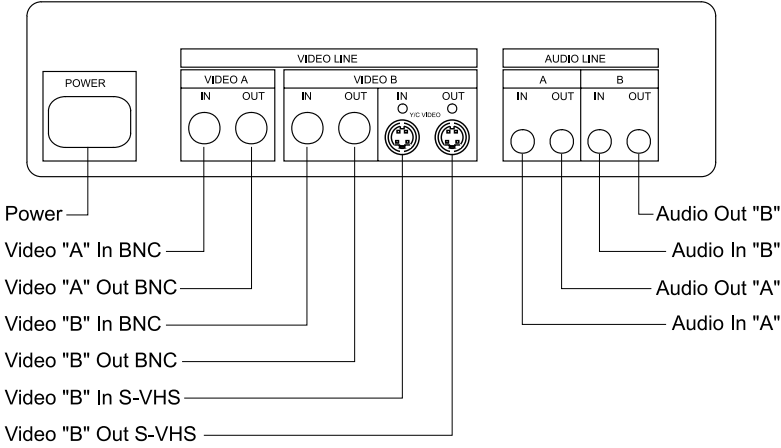


Figure 3 – Rear panel connectors

## Required Installation Tools

Installing the AMC21 monitor does not require any special tools.

## Installation Instructions

**WARNING:** The monitor should be installed in an area that is clean, dry and well ventilated. Do NOT install the monitor where it can get wet; such as near pools, sinks, open windows, etc. Do NOT install the monitor in excessively dusty areas; dust can block ventilation holes causing the monitor to overheat. Operate the monitor on flat firm surfaces; NOT on surfaces such as rugs, carpet, beds or sofas because these can block ventilation holes on the bottom of the monitor. Do NOT install the monitor where items such as drapes or curtains can block ventilation holes. If the monitor is installed in a rack, make certain it has sufficient ventilation.

**WARNING:** If the monitor's plug does not fit your power outlet, do NOT modify the plug. Have a certified electrician update your power outlet. Do NOT route the power cord where individuals can trip on it. Do NOT route the power cord where it can be damaged such as under a rug.

Place the monitor on a flat sturdy surface near a power outlet. Connect the video input cable to the *Video A In* connector. The video input can be from a camera, VCR, multiplexer or the loop output of another monitor. A second video source can be connected the *Video B In*.

If your video source has an audio output, connect the audio from source "A" to *Audio A In* and audio from source "B" to *Audio B In*.

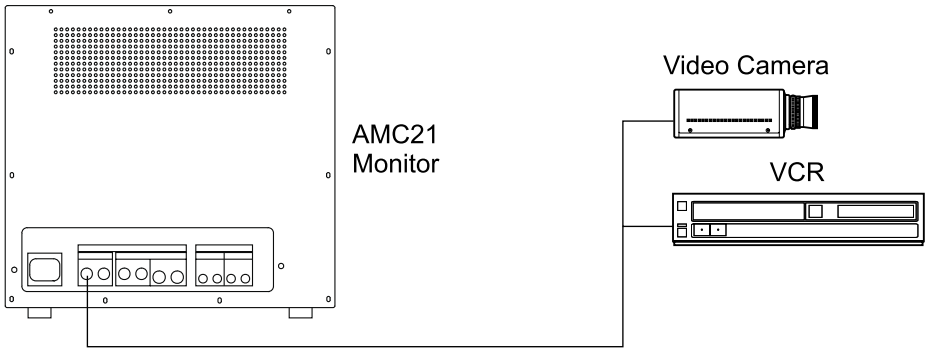


Figure 4 – Single monitor connection

The S-VHS connectors can be used with VCRs that have S-VHS input and output connectors.

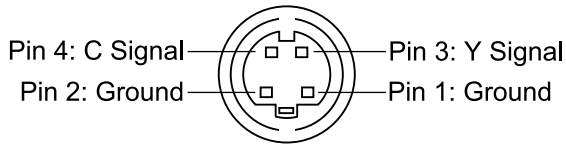


Figure 5 – Y/C Mini DIN connector configuration

If you plan to loop the video out to another monitor, connect a cable to the *Video Out* BNC and route it to the *Video In* of the second monitor. Up to three monitors can be connected using the loop-through feature.

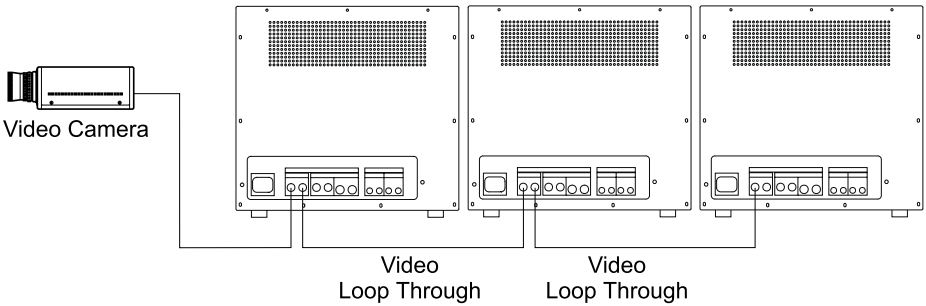


Figure 6 – Multiple monitor connection

Connect the power cord to the back of the monitor and plug it into the power outlet.

## Chapter 3 – Operation

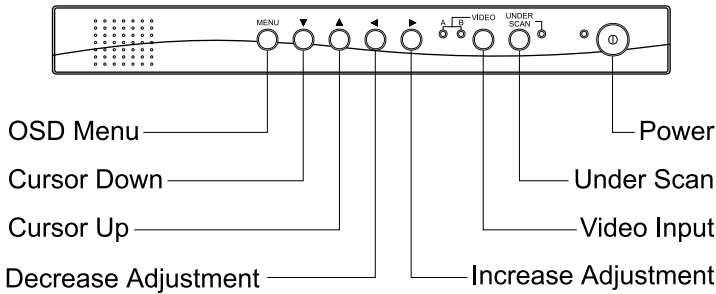


Figure 7 – Front panel controls

To turn on the monitor, press the power button on the front panel. After a few seconds, video should appear on the monitor. If video does not appear, refer to the *Troubleshooting* section of this manual.

Pressing the *Under Scan* button switches between “Over Scan” and “Under Scan.” When the monitor is set to “Under Scan,” the LED is lit and the entire picture, with some black border, is displayed on the monitor. In “Over Scan,” the picture fills the screen.

Pressing the *Video Input* button switches between two video sources. The *A* and *B* LEDs light indicating which video source is displayed on the monitor.

Pressing *Menu* brings up the OSD (on-screen display) menu. The *Up* and *Down* cursors are used to move between items in the menu. The *Left* and *Right* cursors are used to make adjustments to individual menu items.

The OSD menu options are:

- Volume:** Adjusts the audio volume
- Contrast:** Adjusts the image contrast
- Brightness:** Adjusts the image brightness
- Sharpness:** Adjusts the image sharpness
- Color:** Adjusts the image color intensity

**NOTE:** When the monitor is in the PAL mode, *Tint* is not on the menu.

- Tint:** Adjusts the image color. For best results, adjust for natural skin tones.
- H-Position:** Adjusts the horizontal position of the image on the screen.
- V-Position:** Adjusts the vertical position of the image on the screen.
- English:** Selects the menu language. English is the factory default. The user can select from *English*, *French*, *German*, *Italian* and *Spanish*.

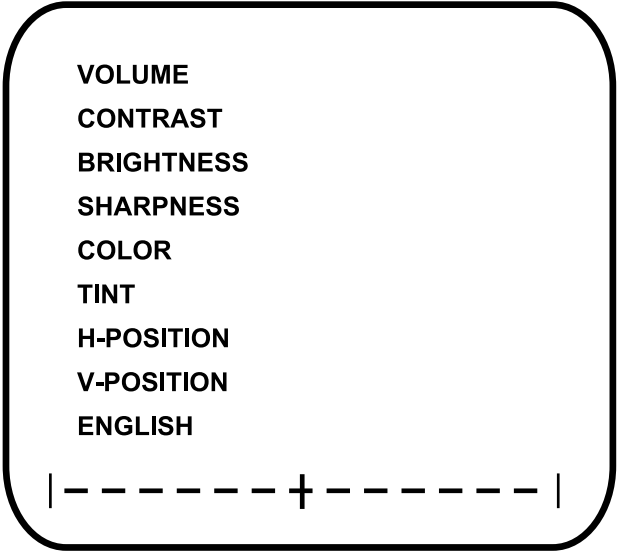


Figure 8 – OSD Menu



## Appendix A – Troubleshooting

Problem	Possible Solution
No Video	<p>Check that all components in the system (monitor, cameras, VCRs, multiplexers, etc.) have power and are turned on.</p> <p>Check that the camera lens cap is removed and the lens is set to proper aperture.</p> <p>Check cable(s) for proper connections and condition.</p> <p>Connect a known good video source directly to the monitor to make certain the monitor is not the problem.</p>
Bad Video	If no video equipment is “looped through” the monitor, make certain that a cable is NOT connected to the loop-through connector.
Black Border	Make certain the <i>Under Scan</i> LED is off.
Poor video quality	Enter the Menu and adjust the <i>Contrast</i> , <i>Brightness</i> , <i>Color</i> and <i>Tint</i> settings.
Picture too bright or too dark	<p>Check that the lens aperture is set correctly.</p> <p>Enter the Menu and adjust the <i>Brightness</i> setting.</p>
Picture is off center	Enter the Menu and adjust the <i>H-Position</i> and <i>V-Position</i> as necessary.
Menu in wrong language	Move the cursor to the bottom menu item using the <i>Up</i> or <i>Down</i> buttons. Then, scroll through the language choices using the <i>Left</i> and <i>Right</i> buttons.

Problem	Possible Solution
Fuzzy Video	<p>If the camera has a manual focus lens, check that it is properly focused.</p> <p>If the camera has an autofocus lens, ensure that it is working properly.</p> <p>Check that the back focus ring on the camera has been adjusted correctly.</p> <p>Check that the lens and housing window are clean.</p>

## Appendix B – Specifications

PICTURE TUBE .....	21" Flat, Square Tube
Phosphor .....	P22
Dot Pitch .....	In-line, 0.71mm stripe
Deflection .....	90° angle
POWER SOURCE .....	90 to 254 VAC, 50Hz or 60Hz
POWER CONSUMPTION .....	80 Watts
VIDEO STANDARD .....	NTSC and PAL (automaticly detects)
RESOLUTION .....	Horizontal: 450 TV lines
SCANNING FREQUENCY	
Horizontal .....	15.75KHz (NTSC);15.625KHz (PAL)
Vertical .....	60Hz (NTSC); 50Hz (PAL)
VIDEO INPUT/OUTPUT	
Video A/B	
NTSC or PAL .....	Composite 1.0 Vp-p (75 Ohms/Hi-Z Auto-Terminating)
Y/C	
S-VHS .... Y sig. = 1 Vp-p; C sig. = 0.285 Vp-p (75 Ohms/Hi-Z Auto-Term.)	
AUDIO INPUT/OUTPUT .....	300mVrms; 2 Watts
CONECTORS	
Video A/B (In andOut) .....	4 BNC Connectors (Auto-terminating)
Y/C (In and Out) .....	2 Mini DIN 4-Pin Connectors (Auto-terminating)
Audio (In and Out) .....	2 RCA Connectors
ACTIVE DISPLAY AREA .....	7% Over scan; 3% Under scan (switchable)
LINEARITY	
Horizontal .....	10% maximum
Vertical .....	10% maximum
AMBIENT TEMPERATURE .....	32°F to 104°F (0°C to 40°C)
DIMENSIONS (W x H x D) .....	19 5/16" x 17 5/16" x 18 11/16"
	490mm x 440mm x 475mm
WEIGHT .....	62 lbs. (28.1Kg)
SHIPPING WEIGHT .....	71.5 lbs. (32.5Kg)



(Headquarters)

175 Eileen Way  
Syosset, NY 11791  
USA

1-516-921-6704

Customer Service: ..... 800-467-5875

Applications: ..... 877-653-0302

Technical Support: ..... 877-718-0746

Fax: ..... 516-921-0491

Web site: [www.ademco.com/ademcovieo](http://www.ademco.com/ademcovieo)

### **ADEMCO International (Headquarters)**

180 Michael Drive  
Syosset, NY 11791  
USA

1-516-921-6704

### **AUSTRALIA**

ADEMCO Australia  
Unit 5, Riverside Centre  
24-28 River Road West  
Parramatta, NSW 2150  
Australia  
61-2-8837-9300

### **ASIA/PACIFIC**

ADEMCO Asia Pacific  
Flat A&B, 7/F, CDW Building  
388 Castle Peak Road  
Tsuen Wan, N.T  
Hong Kong  
852-2405-2323

### **LATIN AMERICA**

ADEMCO International (Latin America)  
1769 NW 79<sup>th</sup> Ave.  
Miami, FL 33126  
USA  
1-305-477-5204

ADEMCO Brasil  
Rua Eng. Isaac Milder, 500  
Sao Paulo, SP  
Brasil  
CEP: 05688-010  
55-11-3758-6111

### **EUROPE**

ADEMCO France  
Parc Gutenberg  
13, Voie La Cardon  
91120, Palaiseau  
France  
33-1-6932-1090

ADEMCO Italia SpA  
Via della Resistenza, 53/59  
20090 Buccinasco - MI  
Italy  
39-02-457-179-1

ADEMCO Sontrix España  
Vivero 5-28040  
Madrid  
Spain  
34-91-533-4706

Security House  
Amperestraat 41  
1446 TR Purmerend  
Netherlands  
31-299-419-000

Video Controls Ltd.  
Aston Fields Rd.  
Whitehouse Ind. Est  
Runcorn  
UK WA7 3DL  
44-1928-754000